State Rail Plan Update

Public Meetings

Springfield

November 9, 2016

Attleboro

November 21, 2016

Agenda

- What is a State Rail Plan?
- Plan Goals
- Public Benefits of Rail
- Existing Rail System
- Short-Term Vision
- 20-Year Vision
- Next Steps

What is a State Rail Plan?

Objective: The State Rail Plan Update will seek to:

- Provide an analysis that will guide future rail investment decisions
- Incorporate *new* PRIIA Expectations (Multi-State Planning)
- Enable Massachusetts to Apply for Federal Rail Funding

ORIGINS: Federal Law (Section 303 of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA))

FEDERAL GUIDANCE FOR STATE RAIL PLAN OUTLINE

- Role of Rail in Statewide Transportation
- Existing Rail Service
- Proposed Rail Improvements and Investments
  - Passenger
  - Freight
- **State's Rail Service and Investment Program**
  - Prioritization of investments – 20 year vision and 4 year program

State Rail Plan Goals

1. PRESERVE & MAINTAIN

- Preserve active and abandoned rail corridors.
- Perform recommended maintenance and rehabilitation for rail equipment and infrastructure systems.

2. PROMOTE ECONOMIC GROWTH

- Enhance passenger rail facilities to accommodate population and job growth.
- Develop strategic rail and intermodal connections to improve freight rail.

3. SAFETY & SECURITY

- Prioritize state of good repair projects that will result in improved safety.
- Improve grade crossing locations that pose safety hazards to vehicle and pedestrians.

State Rail Plan Goals

4. ENVIRONMENTAL STEWARDSHIP

- Reduce emissions and enhance energy efficiency through expanded use of rail and use of efficient railroad equipment.

5. IMPROVE SERVICE & INTERMODAL CONNECTIVITY

- Improve passenger access to commuter and intercity services.
- Increase rail share of intermodal freight traffic through improved highway-rail and water-rail intermodal connections.

6. EXPANSION AND MODERNIZATION FOR ECONOMIC GROWTH

- Improve the freight rail system to capture economic opportunities.
- Provide an efficient and sustainable multimodal passenger system that includes rail.

Public Benefits of Rail

- **Safety**
  - Because intercity train travel is safe, using intercity passenger rail (rather than driving) avoids approximately 5 fatalities per year in Massachusetts.
- **Energy efficiency**
  - Intercity passenger rail service uses 33% less energy per passenger mile traveled than automobiles and 12% less than airline travel.
  - On average, freight railroads are four times more fuel efficient than trucks.

Sources: Association of American Railroads; Ian Savage, "Comparing the Fatality Risks in United States Transportation Across Modes and Over Time"; United States Department of Energy.

Public Benefits of Rail

- **Congestion relief**
  - Massachusetts rail system annually carries a volume of freight equivalent to approximately 850,000 trucks trips.
- **Emissions reduction**
  - Every ton-mile of freight moved by rail instead of truck reduces greenhouse gas emissions by 75%.

Sources: Association of American Railroads; United States Department of Energy.

Existing Rail Systems

- **Principal Passenger**
  - Commuter Rail – MBTA
  - Intercity – Amtrak

- **Principal Freight**
  - Freight Companies
  - Private and State-owned Rail Corridors

Existing Rail Systems

MBTA Commuter Rail System

- 14 Lines with services originating from North Station and South Station in Boston
- Special Event Trains to Foxboro and Seasonal Service to Cape Cod
- 121,600 Weekday Riders – the 6th Busiest in the Nation

Source: American Public Transit Association 2015

Existing Rail Systems

Amtrak System Services in Massachusetts

- Acela Express
- Northeast Regional
- Downeaster
- Lake Shore Limited
- New Haven-Springfield Shuttle
- Vermonter

Existing Rail Systems

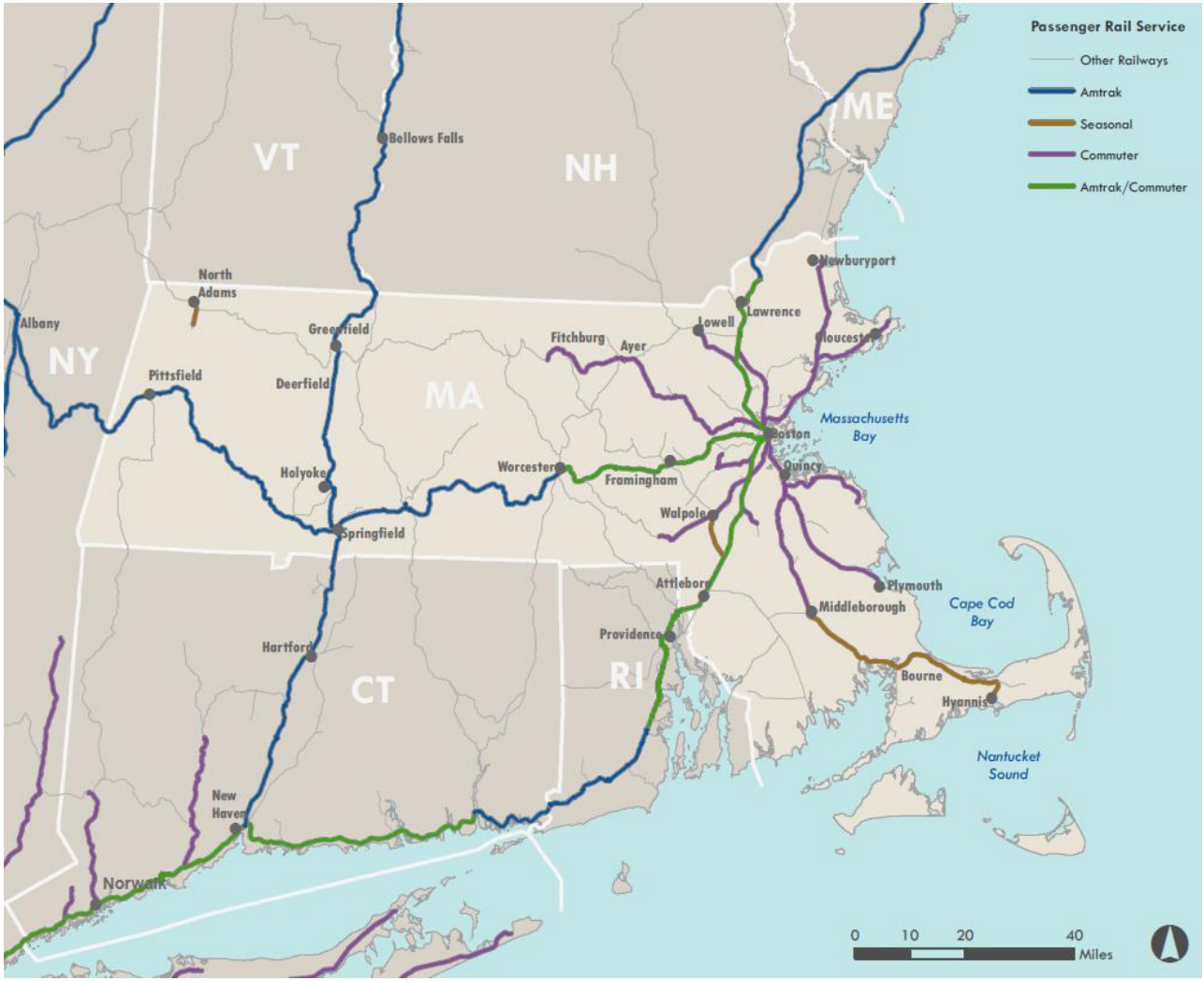
Amtrak Top Stations in Massachusetts (2015 Annual)

- **Western and Central Massachusetts**
  - Springfield Union Station: 123,000
  - Northampton: 12,000
  - Pittsfield: 7,500
  - Worcester: 7,200
  - Greenfield: 5,300
- **Eastern Massachusetts**
  - Boston (South Station and Back Bay): 2.1 Million
  - Route 128 Station: 440,000
  - Boston North Station: 354,000
  - Haverhill: 35,000
  - Woburn: 17,000

Source: National Association of Railroad Passengers 2015

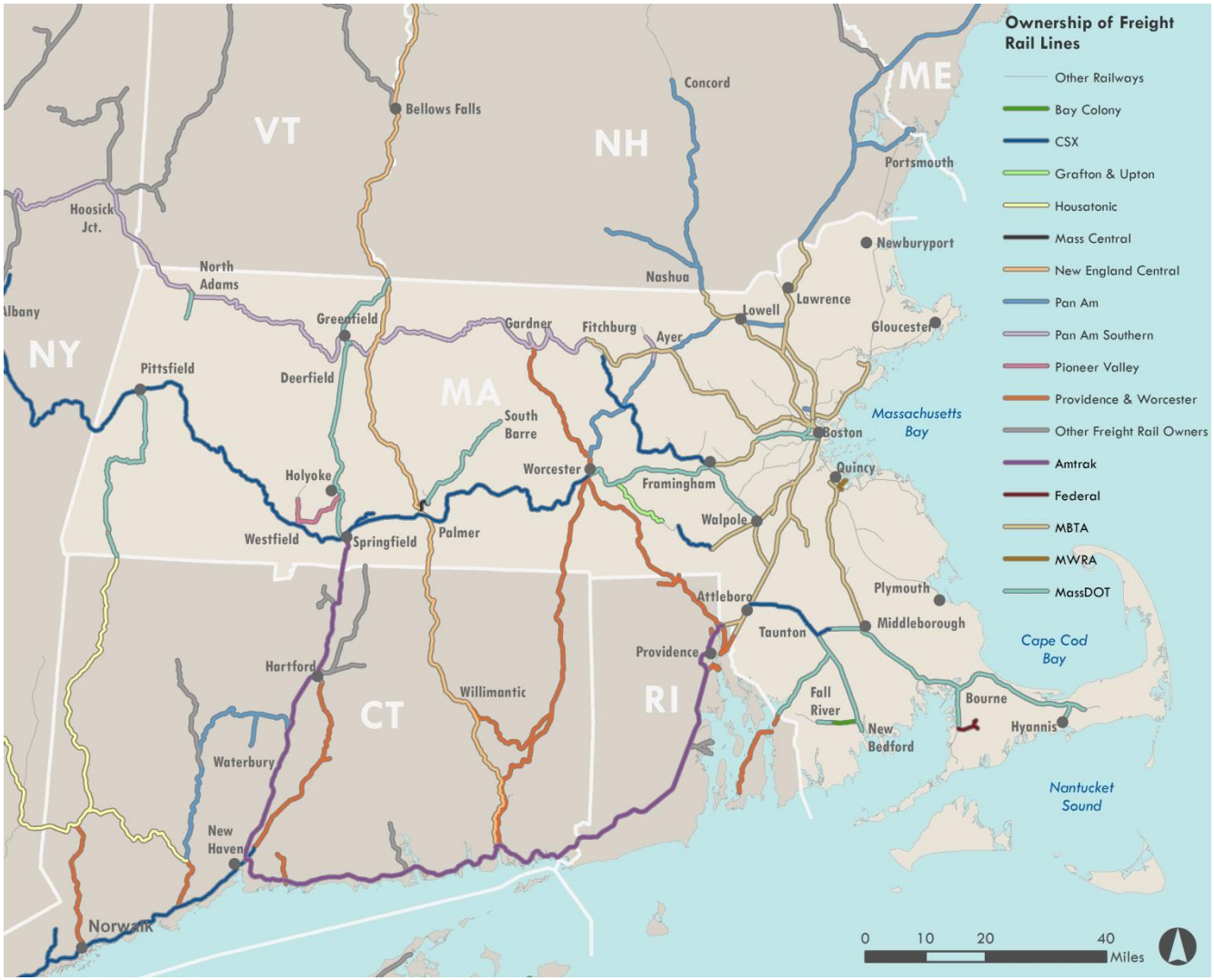
Existing Rail System

PASSENGER NETWORK



Existing Rail System

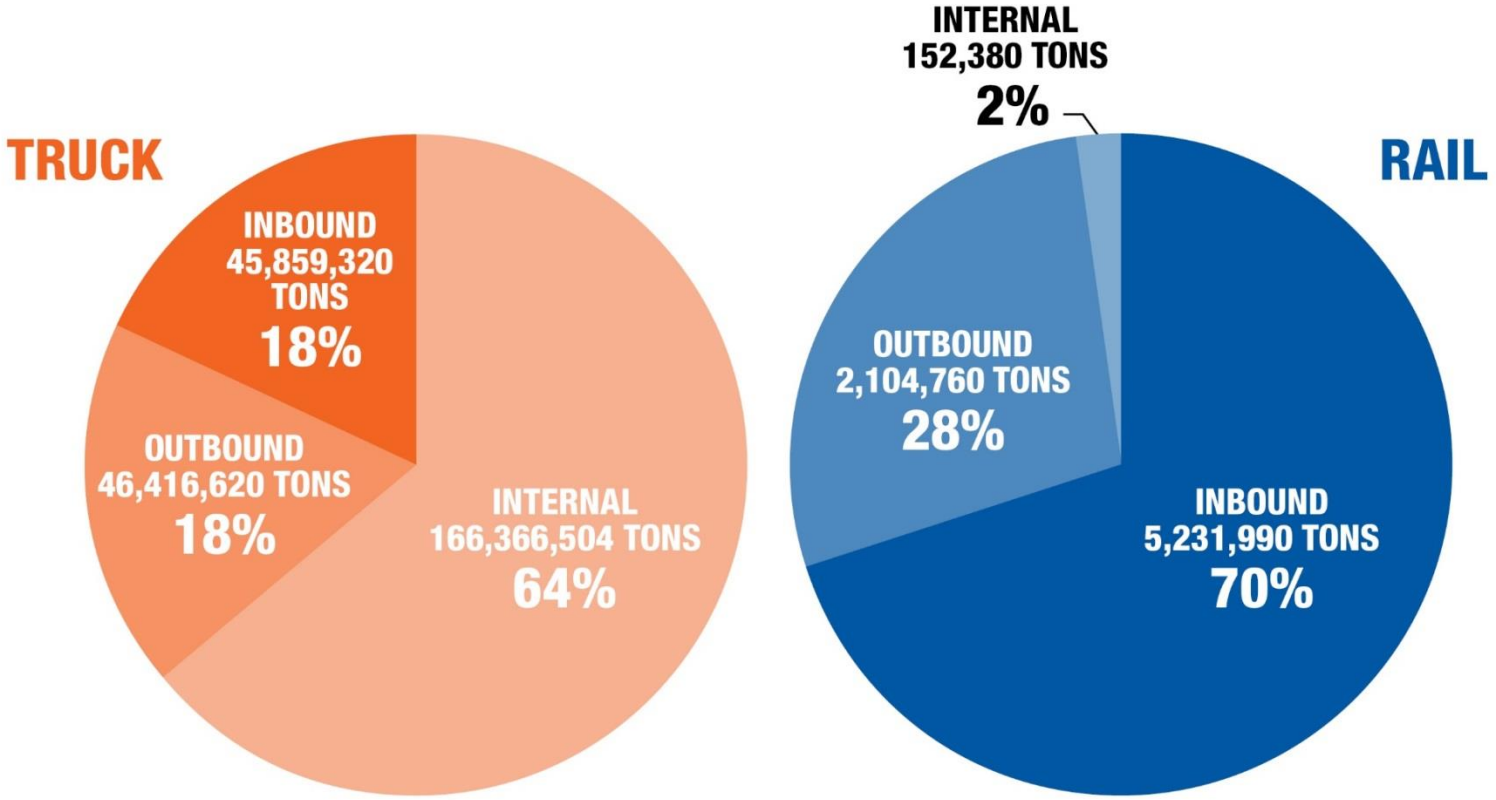
FREIGHT NETWORK: OWNERSHIP



Freight Modal Share in Massachusetts

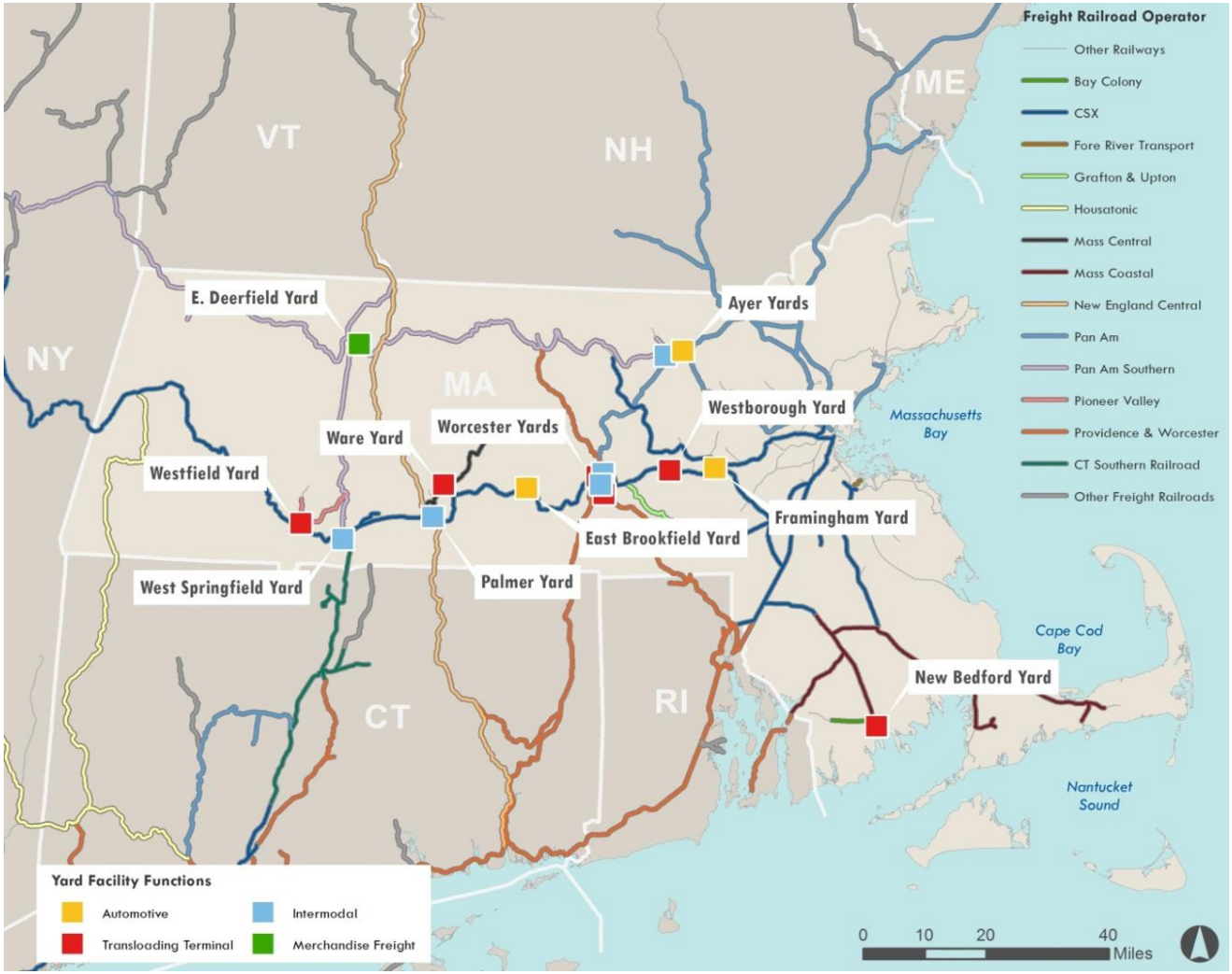
Primary Commodities Shipped by Rail in MA

- By Weight
- Other foodstuffs
- Newsprint/paper
- Waste/scrap
- Cereal grains
- Wood prods.
- Plastics/rubber
- Propane
- Basic chemicals
- Gravel
- Nonmetal min. prods.



Existing Rail System

FREIGHT NETWORK: MAJOR FACILITIES



Rail Service Needs & Opportunities

Passenger Rail

- State of Good Repair is an ongoing and priority need for the passenger rail system.
- Limited Capacity During Peak Periods at Terminals, Yards, Key Rail Corridors and Station Space constrains new services.
- Infrastructure Modernization desired to Maintain a Reliable System and meet new Government Standards.

Rail Service Needs & Opportunities

Freight Rail

- State of Good Repair is an ongoing need for the freight rail system.
- Yard Infrastructure constrains growth of Transloading and Intermodal operations in some areas.
- Existing Vertical Clearance Constraints foreclose Doublestack service on some lines.
- Rail Weight Restrictions limit a carrier's ability to "max-out" a railcar.

Western Massachusetts - Recent Projects

- **Springfield Union Station Improvements**
  - Restored Historic Station is expected to open in 2017:
    - In January new Station Building and bus facility will allow direct connections between bus and rail.
    - Later in 2017 new platform will be available to Amtrak passengers.
    - $60m in State and Federal transportation funds used to renovate building and build bus and rail facilities
- **Knowledge Corridor Improvement Program**
  - State and Federal funds used to purchase and improve freight line so it could be used for passenger service.
  - Restoration of the Amtrak Vermonter Service began in December 2014.
  - New Stations opened at Holyoke, Greenfield & Northampton.
  - Track, Grade Crossing, and Signal Improvements that allowed for faster and more reliable passenger rail service.
- **Hoosac Valley Tourist Railroad**
  - Seasonal Tourist Railroad began in May 2016 after MassDOT purchased and improved Adams Line.

Southeastern Massachusetts - Recent Projects

- **Cape Flyer Service – 2013**
  - New Boston to Cape Cod Seasonal Service
  - Stations located at Hyannis, Buzzards Bay, and Wareham

- **Corridor Improvements – 2011 – 2016**
  - Grade Crossing Improvements on the Southeastern Massachusetts Lines and Framingham Secondary using State and Federal funds used to upgrade rail lines.
  - Tie Replacement and Ballast and Surfacing on Southeastern Massachusetts Lines from Middleboro to Hyannis and New Bedford to Fall River on the South Coast Lines
  - Attleboro Secondary Ballast Improvement and Welded Rail

Overview

State's Rail Service and Investment Program

- Short-Range Four-Year Program – State of Good Repair Focus

- Long-Range 20-Year Vision – Longer term investments that could facilitate economic growth by improving Massachusetts' rail system.

State Rail Service & Investment Program

Short-Range Programs

- **Reliability / State-of-Good-Repair – primary focus**
  - Signal and Track Improvements
  - Bridge and Structure Improvements
  - Station ADA Accessibility Improvements

- **Modernization and Expansion**
  - Positive Train Control
  - Opportunities presented by discretionary Federal grants and other sources.

Western Massachusetts Short-Term Projects (CIP)

- **Adams Branch and Berkshire Line - SGR and maintenance**
  - Bridge Repairs and Replacements
  - Grade Crossing Repairs and Improvements
  - Track and Right-of-Way Improvements
- **Knowledge Corridor Program – SGR and maintenance**
  - Greenfield & Northampton Stations Platform Extension
  - Grade Crossing Repairs and Improvements
  - Track and Right-of-Way Maintenance
  - Bridge Maintenance and Repair
- **Other:**
  - NECR Mainline Enhancements
    - Rail Line Capacity Improvements for Improved Freight Movement
    - Federal Discretionary Funds (Pending)
  - PVPC Pilot

Southeastern Massachusetts Short-Term Projects (CIP)

- **Improvements to Freight and Passenger Lines in SE Mass, including:**
  - Cape Main Line
  - Framingham Secondary
  - Fall River Secondary
  - Middleboro Subdivision Improvements
  - New Bedford Secondary
  - Watuppa Branch
- **Improvements to these lines include:**
  - Grade Crossing Repairs and Improvements
  - Track and Right-of-Way Improvements
  - Equipment and Maintenance
  - Bridge Repairs and Replacements

State Rail Service & Investment Program

Long-Term Vision

- **Long-Term Reliability & Resiliency**
  - Maintain and improve the rail system in Massachusetts to enable efficient and dependable passenger and freight rail operations.
- **Modernization**
  - Improve existing systems to meet industry standards and federal regulations to ensure proper operations for both freight and passenger rail services.
- **Expansion**
  - Where fiscally and environmentally prudent, pursue expansion opportunities that promote economic development for Massachusetts citizens and businesses.

Western Massachusetts 20-Year Thoughts

"What We've Heard from You…"

- **Regional Passenger Rail Concepts**
  - *CT Rail New Haven-Springfield Service*
  - *Knowledge Corridor Improvement Program*
  - *Berkshire Line Service to NYC*
- **Intercity Rail Concepts**
  - *New Haven-Montreal via Springfield Intercity Rail*
  - *Inland Route – Boston to New Haven via Springfield*
  - *NEC Future*
- **Station Concepts**
  - *Springfield Union Station – Additional Improvements*
  - *Station in the Town of Palmer*

Southeastern Massachusetts 20-Year Thoughts

"What We've Heard from You…"

- **Commuter Rail**
  - *Buzzards Bay and Cape Cod Commuter Rail Pilot*
  - *South Coast Rail Commuter Service*
- **Intercity Rail**
  - *NEC Future*
- **Station**
  - *Bourne & Wareham Rail Stations*
  - *Stations Associated with South Coast Rail*

Next Steps

Evaluation Process

- **Initial Project Identification & Development of Evaluation Criteria**
  - Input from November Public Meetings & Stakeholders
  - MassDOT Rail Planning Goals & Objectives
  - Late November through Late March 2017
- **Phase 1 Evaluation Criteria**
  - Initial Evaluation/ Ranking of projects (including SGR needs) based on established criteria.
  - Late November through Late March 2017
- **Identification of Projects for Economic Analysis (Phase 2)**
  - Selection of Projects based on Phase 1 Evaluation/Ranking
  - April and Early May 2017
- **Phase 2 Benefit-Cost Analysis**
  - Determine the Long-Term Benefits of Top State-Wide Projects
  - Late April through Mid-August 2017
- **Finalization of State Long-Term Plan**
  - Fall 2017

MA State Rail Plan: Project Schedule Extension

- State Rail Plan extended from January 2017 to Fall 2017.

- Purpose: To evaluate and rank rail projects to guide future rail investments.
  - Advancing CIP projects for short term
  - Using economic growth as key metric for longer vision

- Public Process (Spring/Summer 2017)

Questions and Discussion

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